



Air quality planning in California's changing climate

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Year: 2012
Journal: Climatic Change. 111 (1): 101-118

Abstract:

California is home to some of the worst air quality in the nation and ninety percent of the state's population lives in areas that are out of attainment with at least one of the National Ambient Air Quality Standards. Increasing temperatures associated with climate change will make meeting air quality standards more difficult. Under a changing climate, additional emission reductions will be needed to achieve clean air standards. These additional emission reductions and associated costs are called the "climate penalty." Air quality planning is the process of assessing the emission reductions needed to meet air quality standards and outlining the programs and policies that will be implemented to achieve these emission reductions. This paper reviews the challenges that a changing climate will pose for air quality planning in California and identifies opportunities for adaptation. While state air quality regulators in California are taking enormous strides to address global warming, less work is happening at the regional, air district level. Air districts are the agencies responsible for developing air quality improvement plans. An important first step for regional air quality regulators will be to quantify the climate penalty and understand their region's vulnerability to climate change. Limitations in regulatory authority could impede measures to improve preparedness. Regional agencies will likely need to look to state and federal agencies for additional emission reductions.

Source: <http://dx.doi.org/10.1007/s10584-011-0244-0>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Extreme Weather Event, Temperature

Air Pollution: Interaction with Temperature, Ozone, Particulate Matter

Extreme Weather Event: Wildfires

Temperature: Extreme Heat, Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

Climate Change and Human Health Literature Portal

resource focuses on specific location

United States

Health Co-Benefit/Co-Harm (Adaption/Mitigation):

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

Resource Type:

format or standard characteristic of resource

Policy/Opinion, Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content